# PERMIT APPLICATION - NATURAL GAS PROCESSING
**NORTH DAKOTA DEPARTMENT OF HEALTH**
**DIVISION OF AIR QUALITY**
SFN 11408 (12-05) AP 107

GENERAL

| Name of Firm or Organization | | Application Date |
|---|---|---|
| Person Submitting Application | Title | Telephone Number |
| Mailing Address | City & State | Zip Code |
| Plant Location<br>1/4 Sec. Twp. Rge. | County | Source ID |

**SWEETENING OPERATIONS**

| Chemical Process (Amine, Selexol, Stretford, Etc.) | Inlet Gas Capacity<br>x $10^6$ standard cu. ft/day |
|---|---|

Inlet Gas Composition (Mol %)

| | | | |
|---|---|---|---|
| | Hydrogen Sulfide, $H_2S$ | | Methane, $C_1$ |
| | Carbon Dioxide, $CO_2$ | | Ethane, $C_2$ |
| | Water, $H_2O$ | | Propane Plus, $C_3$ + |
| | Nitrogen, $N_2$ | | Other - Specify |

**ACID GAS FLARE - STACK DATA**

| | AVERAGE ACID GAS FLOW RATE TO FLARE | MAXIMUM ACID GAS FLOW RATE TO FLARE | $H_2S$ CONTENT (%) | HEAT CONTENT OF GAS (BTU/ACF) |
|---|---|---|---|---|
| Height Above Grade (Ft) | SCFM | SCFM | | |
| Inside Diameter at Exit (Ft) | ACFM | ACFM | | |

**ACID GAS FLARE - STACK EMISSIONS**

| Pollutant | MAXIMUM POUNDS PER HOUR | TONS PER HOUR | Basis and Calculations for Quantities: |
|---|---|---|---|
| Particulate | | | |
| Sulfur Dioxide | | | |
| Nitrogen Oxides | | | |
| Carbon Monoxide | | | |
| Other - Specify | | | |

**SULFUR RECOVERY OPERATIONS**

| Chemical Process (Clause, Amoco, MRCR, Etc.) | Acid Gas Flow Rate<br>x $10^6$ standard cu. ft/day |
|---|---|

Acid Gas Composition (Mol %)

| | | | |
|---|---|---|---|
| | Hydrogen Sulfide, $H_2S$ | | Ethane, $C_2$ |
| | Carbon Dioxide, $CO_2$ | | Propane Plus, $C_3$ + |
| | Water, $H_2O$ | | Other - Specify |
| | Methane, $C_1$ | | |

| Is a tail gas cleanup process used for reducing $SO_2$ emissions?<br>□ YES □ NO | Tail Gas Cleanup Process (CBA, Sulfreen, SCOT, etc.) |
|---|---|
| Overall Recovery Efficiency<br>% | Elemental Sulfur Recovered<br>LT/Day |

**TAIL GAS INCINERATOR - OPERATIONS**

| Name of Incinerator Manufacturer | Heat Release BTU/HR | Model N umber |
|---|---|---|

Inlet Gas Composition (Mol %)

| | | | |
|---|---|---|---|
| | Hydrogen Sulfide, $H_2S$ | | Nitrogen, $N_2$ |
| | Carbon Dioxide, $CO_2$ | | Other - Specify |
| | Water, $H_2O$ | | |
| | Nitrogen, $N_2$ | | |

**TAIL GAS INCINERATOR - STACK DATA**

| | | EXIT GAS FLOW RATE | AVERAGE | MAXIMUM |
|---|---|---|---|---|
| Height Above Grade (Ft) | Gas Temperature at Exit (Average ℉) | SCFM | | |
| Inside Diameter at Exit (Ft) | Gas Velocity at Exit (Average FPS) | ACFM | | |

**TAIL GAS INCINERATOR - STACK EMISSIONS**

| Pollutant | MAXIMUM POUNDS PER HOUR | TONS PER YEAR | Basis and Calculations for Quantities: |
|---|---|---|---|
| Particulate | | | |
| Sulfur Dioxide | | | |
| Nitrogen Oxides | | | |
| Carbon Monoxide | | | |
| Other - Specify | | | |

**EMERGENCY FLARE - STACK DATA**

| | AVERAGE ACID GAS FLOW RATE TO FLARE | MAXIMUM ACID GAS FLOW RATE TO FLARE | $H_2S$ CONTENT (%) | HEAT CONTENT OF GAS (BTU/ACF) |
|---|---|---|---|---|
| Height Above Grade (Ft) | SCFM | SCFM | | |
| Inside Diameter at Exit (Ft) | ACFM | ACFM | | |

**EMERGENCY FLARE - STACK EMISSIONS**

| Pollutant | MAXIMUM POUNDS PER HOUR | TONS PER YEAR | Basis and Calculations for Quantities: |
|---|---|---|---|
| Particulate | | | |
| Sulfur Dioxide | | | |
| Nitrogen Oxides | | | |
| Carbon Monoxide | | | |
| Other - Specify | | | |

| Signature of Applicant | Date |
|---|---|
| X | |

SEND COMPLETED APPLICATION TO:

North Dakota Department of Health
Division of Air Quality
918 E Divide, 2nd Floor
Bismarck, ND 58501-1947

Telephone: (701)328-5188